



# DRY CLEANER HAZARDOUS WASTE MANAGEMENT

Delaware Department of Natural Resources and Environmental Control,  
Solid & Hazardous Waste Management Section

## How does dry cleaning work?

Dry cleaning is not really “dry.” Instead of using water, dry cleaning uses a liquid, known as a solvent, to dissolve other substances (i.e. dirt, stains, grease, oil, etc. in fabric). This solvent generally is perchloroethylene, (PCE). Mineral spirits is also sometimes used. This fact sheet provides guidance for dry cleaners using PCE or similar solvents (i.e. mineral spirits).

## What hazardous wastes may be generated at a dry cleaning site and how are they regulated?

Typical wastes generated by dry cleaners include spent PCE, bottom residues from solvent distillation, spent filter cartridges, and PCE contaminated water. Any site that produces these hazardous wastes is subject to the federal and state requirements covering the generation, transportation, and management of hazardous waste. PCE is a hazardous waste, although not an acute hazardous waste.

## Human Health and Environmental Concerns

PCE is a widely used chemical solvent in dry cleaning. It is effective in removing stains and dirt from all common types of fabric. It is a colorless, nonflammable liquid that evaporates easily. PCE is also known as tetrachloroethylene, PERC, perclene, and perchlor.

Releases of PCE (for example, from spills, improperly handled waste, and leaking pipes, tanks, or machines) may cause contamination in soil, ground and surface waters, and air. In ground water, PCE can persist for decades and travel in plumes with the ground water flow. PCE evaporates easily and ground water contaminated with PCE can “vent” PCE vapors into the soils above. In addition, indoor air in overlying structures, such as homes, can become contaminated with PCE as it makes its way through cracks in foundations and crawl spaces.

The effects of PCE on human health depend greatly on how much PCE one is exposed to, and the length and frequency of exposure. Short-term exposure of PCE can cause loss of coordination, dizziness, headaches,

sleepiness, confusion, and nausea. Contact with PCE in its liquid or vapor form can irritate the skin, eyes, nose, and throat. The EPA has determined PCE to be “a likely human carcinogen” and the EPA is working with the dry cleaning industry to reduce emissions and phase out use of PCE in some settings.

## What is your generator status?

The amount of hazardous waste you generate will determine your generator status. Typically, you will be either a Conditionally Exempt Small Quantity Generator (CESQG) or a Small Quantity Generator (SQG).

### CESQG:

- Generate  $\leq 100$  kg (220 lbs) of hazardous waste or  $\leq 1$  kg (2.2 lbs) of acute hazardous waste in one calendar month; and
- Accumulate  $\leq 1,000$  kg (2,200 lbs) on-site at one time

### SGQ:

- Generate between 100 kg (220 lbs) and 1,000 kg (2,200 lbs) of hazardous waste in one calendar month; and
- Accumulate  $< 6,000$  kg (13,200 lbs) on-site at one time

Large Quantity Generators generate  $\geq 1,000$  kg (2,200 lbs) of hazardous waste in one calendar month; if you are a large quantity generator, contact DNREC for guidance. Depending on your generator status, you will have different regulatory requirements.

## Regulatory requirements for CESQGs

Follow the generation limits and accumulation time limits for CESQGs discussed above. In addition, you must:

- **Determine whether your waste is hazardous** or non-hazardous; remember, spent PCE bottom residues, spent filter cartridges, and PCE

contaminated water may each be a hazardous waste

- **Label** all your hazardous waste containers as “**Hazardous Waste**” or “**Waste**” and a **description**; for example, “Waste PCE”
- Keep all containers **closed** at all times, unless adding or removing waste
- Only use containers that are in good condition and compatible with the waste
- Be careful to not open, handle, or store your containers in a way that will cause leaks
- Ensure that all your hazardous waste goes to a Treatment, Storage, and Disposal Facility (TSDF) and **retain documentation showing that proper delivery to a TSDF for 3 years** (this can be a manifest, tolling agreement, letter of acceptance, etc.)

### Regulatory requirements for SQGs

If you are a SQG, follow the generation limits and accumulation time limits for SQGs discussed above. Then follow all the requirements listed below:

- **Determine whether your waste is hazardous** or non-hazardous; remember, spent PCE bottom residues, spent filter cartridges, and PCE contaminated water may each be a hazardous waste
- Obtain an EPA Identification Number for your site
- **Label** all your hazardous waste containers as “**Hazardous Waste**”
- Mark all containers with the **accumulation start date** (the date the first drop of hazardous waste was added to the container)
- Keep all containers **closed** at all times, unless adding or removing waste
- Only use containers that are in good condition and compatible with the waste
- Be careful to not open, handle, or store your hazardous waste containers in a way that will cause leaks
- Do not put incompatible wastes in the same container
- Ensure that all your hazardous waste goes to a Treatment, Storage, and Disposal Facility (TSDF) and **retain documentation showing that proper delivery to a TSDF for 3 years** (must be a manifest)
- Have an alarm system or internal communication system in case of an emergency
- Have adequate water supply in case of a fire
- Have fire extinguishers, spill kits, and decontamination equipment on-site
- Test your emergency equipment to make sure it is working (for example, make sure your fire

extinguishers are fully charged and your emergency alarms work)

- Leave adequate aisle space throughout site
- Designate one employee to be the **emergency coordinator** (either on-site or on-call at all times) to handle any emergencies
- Notify the local **police, fire, and hospital** about what hazardous waste you have on site and where they are located; retain documentation of this notification
- Next to the telephone, post a sign with the name and telephone number of the emergency coordinator, the fire department telephone number, and the location of the spill equipment, fire extinguishers, and emergency alarms
- Make Land Disposal Restriction determinations and retain for 3 years
- Train all employees who handle hazardous waste

You may store your waste in either 180 day waste accumulation areas or in satellite areas. A 180 day area is simply a designated area for short term storage of hazardous waste (usually in larger quantities). A satellite area is a smaller area to accumulate waste that has been generated close by (a good rule-of-thumb is to have the satellite area in the line of sight of where the waste was generated) and under the control of the operator (an employee who is working in the area near where the waste is generated). Satellite areas must have  $\leq 55$  gallons of hazardous waste or one quart of acute hazardous waste. Satellite containers do not have to be dated but they must be closed and labeled. For 180 day areas, follow these additional requirements:

- Only store your hazardous waste on-site for  $\leq$  **180 days** (you can keep track of this easily because all your containers need to be dated)
- Have **secondary containment** (for example, a spill pallet or an impervious concrete floor inside a building)
- Post a “**No Smoking**” sign if you have ignitable or reactive waste; keep ignitable wastes away from sources of ignition
- Make weekly inspections of the accumulation area; retain those records for 3 years

### More Information

State hazardous waste regulations are in 7 DE Admin Code 1302 of Delaware’s *Regulations Governing Hazardous Waste*, Parts 260-266, 268.

<http://regulations.delaware.gov/AdminCode/title7/1000/1300/1302/index.shtml>

For more assistance, contact DNREC, Solid and Hazardous Waste Management Section at 302-739-9403 or Karen J’Anthony, Program Manager, at [karen.janthony@state.de.us](mailto:karen.janthony@state.de.us)